

CLAIMS:

- 1 1. A method for analyzing the runtime behavior of a program given a set of one
2 or more probes and points for inserting the probes for performing a specified
3 inspection, the method comprising:
4 providing a compiler with one or more of the following types of semantics
5 about each probe: specifying probe's context, its filter criteria, whether it is a fast-path
6 probe, whether it is a timing probe, the probe's guard swing, the probe's context
7 hardness, and the probe's temporal hardness; and
8 compiling the program with the one or more probes and the semantics.
- 1 2. The method of claim 1, wherein the semantics relate solely to the probe's
2 context.
- 1 3. The method of claim 1, wherein the semantics relate solely to the probe's filter
2 criteria.
- 1 4. The method of claim 1, wherein the semantics relate solely to whether the
2 probe is a fast-path probe.
- 1 5. The method of claim 1, wherein the semantics relate solely to whether the
2 probe is a timing probe.
- 1 6. The method of claim 1, wherein the semantics relate solely to the probe's
2 guard swing.

Express Mail No. *EV323492955US*

Docket Number YOR920030083

1 7. The method of claim 1, wherein the semantics relate solely to the probe's
2 context hardness.

1 8. The method of claim 1 further comprising receiving one or more insertion
2 points from a user indicating where to insert the native probes.

1 9. The method of claim 1 further comprising receiving an operation from the user
2 encoded as a Java subroutine.

1 10. The method of claim 9 further comprising receiving an operation from the user
2 encoded as a native subroutine.
3

- 1 11. An information processing system comprising:
2 an input/output device for receiving a program to be analyzed, a set of probes
3 to be inserted in the probe, and probe semantics relating to the set of probes; and
4 a processor for executing inserting the probes; and
5 a memory for storing the information and the program to be analyzed, wherein
6 the probe semantics include at least one of: specifying probe's context, its filter
7 criteria, whether it is a fast-path probe, whether it is a timing probe, the probe's guard
8 swing, the probe's context hardness, and the probe's temporal hardness.
- 1 12. The system of claim 12 wherein the input/output device further comprises a
2 CDROM drive.
- 1 13. The system of claim 13 wherein the input/output device further comprises a
2 network interface.
- 1 14. The system of claim 13 wherein the memory further comprises a compiler for
2 compiling the program with the one or more probes and the information.

1 15. A computer readable medium for analyzing the runtime behavior of a program
2 given a set of one or more probes and points for inserting the probes for performing a
3 specified inspection with minimal perturbation comprising instructions for:
4 providing a compiler with one or more of the following types of semantics
5 about each probe: specifying probe's context, its filter criteria, whether it is a fast-path
6 probe, whether it is a timing probe, the probe's guard swing, the probe's context
7 hardness, and the probe's temporal hardness; and
8 compiling the program with the one or more probes and the semantics.

1 16. The computer-readable medium of claim 15 wherein the semantics relate
2 solely to the probe's context.

1 17. The computer-readable medium of claim 15 wherein the semantics relate
2 solely to the probe's filter criteria.

1 18. The computer-readable medium of claim 15 wherein the semantics relate
2 solely to whether the probe is a fast-path probe.

1 19. The computer-readable medium of claim 15 wherein the semantics relate
2 solely to whether the probe is a timing probe.

1 20. The computer-readable medium of claim 15 wherein the semantics relate
2 solely to the probe's guard swing.

1 21. The computer-readable medium of claim 15 wherein the semantics relate
2 solely to the probe's context hardness.

Express Mail No. *EV323492955US*

Docket Number YOR920030083